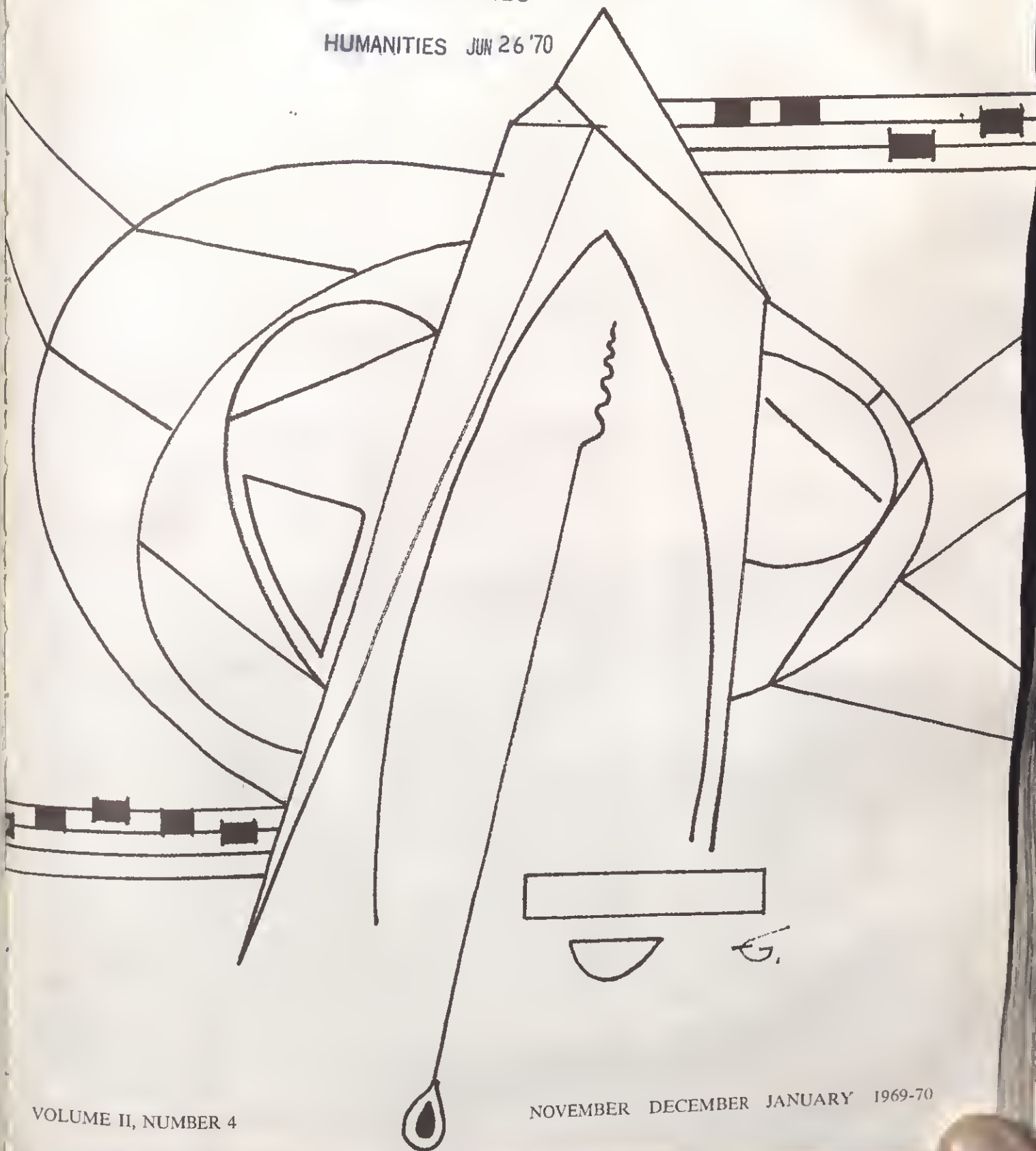


The HARPSIGORD

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VOLUME II, NUMBER 4

NOVEMBER DECEMBER JANUARY 1969-70

THE HARPSICHORD

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Requests for membership or additional information may be sent to International Harpsichord Society, P. O. Box 4323, Denver, Colorado 80204.

GO FOR BAROQUE

by *Hal Haney*



We were going to show you pictures of our new offices in this issue, but when it came down to presstime, we decided that it really wasn't too important after all, so we are using that valuable space for additional information on harpsichords and clavichords. Sometime in the future, we hope to do an entire history of the Society and our journal and we can use the pictures then.

We are very proud to announce a new Sustaining Member, Mr. Daniel H. H. Casebeer of Tulsa, Oklahoma. His membership fee is being added to that of Dr. George Sargent and Mr. Robert T. Volbrecht to help pay the cost of printing our harpsichord "Who's Who". Dr. Philip S. Bergman is added to our list of Contributing Members. We are very grateful for this wonderful help.

The "Who's Who" forms are still arriving from new members, but we believe there are quite a few established members who either have not received their forms, or have not completed them. If you have not received a pink questionnaire containing 17 questions about your interest in harpsichords, clavichords, etc., be sure to let us know and we will send one out to you immediately.

There are several new advertisers in this issue. The new E. Power Biggs harpsichord recordings are advertised on page 8. We have heard these recordings and will review them in length in a future issue. If you have them in your own library, you might consider using them for gifts. The long-awaited Wallace Zukermann book: "The Modern Harpsichord" is now available and

is advertised by October House on page 19. In the last issue we advertised handsome nameboard decals for William I. Myers then did not print the street address! You'll find the correct address in Baroque Bazaar. We have a sample of these decals here in the office and they are very well done. They add a professional touch to any instrument. And to round things out, Clavis Imports has returned with a new ad for the Prelleur harpsichord book and the Barenreiter Music Calendar. All great gift giving ideas.

We received two fine mentions in two excellent publications. The 125-year-old Musical Times of London wrote of our Harpsichord of Note in their September issue. Larry Palmer mentioned our last issue in his column "Harpsichord News" which appears every month in "The Diapason". We are very thankful for this recognition.

Ron Haas, one of our earliest members of the Society, wrote a letter which should appear in the "Letters" section, but since we ran out of space, we'll include it here.

"Dear Mr. Haney,

Dr. Egbert's enquiry in the last issue of The Harpsichord, about the Hass harpsichord recording may have been the not-too-satisfactory VOX Box No. SVBX572 with Joseph Payne playing music from the Fitzwilliam Book on a H. Hass replica built in 1965 by Eric Herz of Boston. Also, Leonhardt on Telcfunken SAWT 3463-B plays on a 1766 Kirkman, a replica of a 1782 K. A. Grabner and a 1745 replica D. Dulcken, and on a Cambridge Record, No. CM509 & 508 uses an authentic 18th century instrument. On E. A. 71 Leonard Raver plays works by Thomas Roseingrave on a 1612 Hans Ruckers, a 1762 Kirkman and a 1770 Broadwood-Shudi. On Janus 19019, Herbert Bedard plays L. Couperin and G. Boehm on a 1646 Andreas Ruckers."

This letter was in answer to a question about records featuring antique instruments.

We received a letter from Viktor Furst (and a membership) with the note that he may be the most distant

(Continued on page 7)

SYMPATHETIC VIBRATIONS

Don't Cross Your Bridges

by Wallace Zukermann



"Don't cross your bridges 'till you come to them" seems to be a common attitude on the part of many modern harpsichord makers I interviewed for my book.

They seem to have no convictions about whether to cross underneath the bridge with ribs or whether to use the classical system. The size, shape and curve of the bridge as well as amount of string bearing are often treated in a haphazard manner.

First, it should be noted that bridges were never crossed underneath in historical instruments, with the single exception of some Italian harpsichords where ribs did run under the bridges, but were always cut out at the point of crossing.

The size and shape of the bridge and the amount of string bearing upon it, seem all to be very important factors in determining the tone. Most of the better harpsichord makers are agreed that the bridge should be as *unencumbered* as possible, and that means little weight, no excessive string bearing, and no 16' weighting down 8' bridges.

One reason why the German production harpsichord usually lacks a sonorous, singing tone, is that the 8' bridge is encumbered with a superstructure holding the 16' while at the same time ribs cross under it. In addition, the bearing is often excessive, which in double pinning can cause another problem, that of "frictional retardation." This occurs when the string traverses through the double pins of the bridge at such sharp angles that in tuning, part of the string is pulled to pitch, while the remainder slowly

makes its way through the pins half an hour after the tuning job.

The best makers use single pinning at the treble and tenor sections of their bridge, but go to double pins in the bass. The bridges themselves taper both in thickness and height from treble to bass. In the treble where the strings are thinnest and presumably weakest to transmit impulses to the bridge, bridges are kept at their slimmest. In the bass the good makers follow historical instruments (i.e., Kirckmann) in double pinning by putting one pin on top of the bridge and the other on the side of the bridge facing the hitchpin rail. This pin is bent over, so that the string going over the side and hooking under the pin actually "lifts" the bridge to compensate for the downwards pressure exerted by the string up to that point. The idea seems to be to make firm contact with the bridge without encumbering it.

The lifting action of the side bridge pin often brings with it a slight "roll" of the soundboard, making it arch between bridge and hitchpin rail, and dip on the other side of the bridge. This is a common sight on some of the better harpsichords and seems not to interfere with the tone.

In this connection, the reader is advised to try a simple experiment suggested by Frank Hubbard when he says that all modern harpsichords sound like a Ruckers when a hammer or other heavy object is placed on the bridge. What the hammer does is to encumber the bridge, and trying this little experiment will prove startling; there is a spectacular deterioration of the tone at the points near the heavy object resting on the bridge. It all adds up to a firm conclusion: If you are going to design a harpsichord, cross (or much better, *don't* cross) your bridge before you come to it! ☺

Hearty Season's Greetings
To All Who Love Music
With Best Wishes For All Success
In This New Year — 1970
from H.L.H. & E.G.G.

THE COVER

THE COVER, by Ed Golikoff, is a simple linear composition based on the concepts tunnel, funnel, channel and the metronome. It serves as a visual introduction to the dialogue on page 12 by Robert W. Jones. ☺

ACKNOWLEDGEMENTS

The International Society of Harpsichord Builders is proud to give special recognition to the following Contributing Members whose interest and generosity aid materially in the development and preservation of the instruments and music of the baroque period and assists in furthering the various projects and programs of the Society.

SUSTAINING MEMBERS

Mr. Daniel H. H. Casebeer
Tulsa, Oklahoma
Dr. George Sargent
Allison Park, Pennsylvania
Mr. Robert T. Volbrecht
Bernardsville, New Jersey

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Mr. Thomas M. Hood
Tallahassee, Florida
Mr. Joseph P. Rawley
High Point, North Carolina
Mrs. Barbara A. Tooman
Racine, Wisconsin
Dr. George E. Wantz
New York, New York

When *THE HARPSICHORD* first started corresponding with Hugh Boyle, we were particularly pleased with the additional material Hugh always included with his letters. Knowing our interest in art, architecture and history, he always added interesting side lights to his information on

harpsichords. His past letters have included books, pamphlets, maps, postcards and original photographs which were not intended for publication but for our own edification and enjoyment. Hugh's current letter contained many photographs which gave us a glimpse into his life and surroundings as he

researches information for his column. After some persuasion we convinced him to let us use these photographs and background material so we could share them with you. We are very proud to be able to present in this issue, an expanded and illustrated "Letter from London."

(HLH)

From **L**ONDON

by Hugh Boyle



One Saturday morning, just a few weeks ago, I set out in high spirits for the railway station at Chislehurst where I caught a train to the town of Sevenoaks in the

county of Kent — a county whose exceptionally fertile soil has, throughout the centuries past, kept both its nobles and yeomen farmers among the wealthiest in England, and left it unusually rich in prereformation buildings of every kind.

The thirteenth-century house in the district of Sevenoaks — now known as "Pitt's Cottage" — is a typical example of such a building, for, though this cottage was at one time the home of William Pitt, its oak-timbers were, in fact, already old at the time of Drake and the Armada, and have, over the years, become so hardened that it is now practically impossible to drive a nail into them.

A somewhat larger example in

the same area and of roughly the same period, is Knole — the country seat of the Sackvilles since the time of Queen Elizabeth the First. This great house, with its seven courtyards, fifty-two staircases, and three hundred and sixty-five rooms, is surrounded by more than one thousand acres of wooded slopes and grassland — short cropped by deer that graze there still. Members of International Harpsichord Society may recall that the only John Haward harpsichord known to have survived — which is the earliest seventeenth-century English harpsichord, and the second oldest English domestic keyboard instrument of any kind yet recorded — is among the many rare possessions of this historic home.

Here I must confess that neither of the houses so far described had any direct connection with this particular visit of mine. But, as I am one of those people who find it impossible to pass within close range of places as intriguing as these without having something to say about them — I hope that I will be forgiven. The place I was really making for on this occasion — which lay about a mile north of Knole and some two miles south of Pilgrim's Way — was an old bakery, now used to accommodate the work-

shops and showroom of John Feldberg's.

The firm of John Feldberg has now been making harpsichords for more than ten years. The aim of all their current designs — based on the conception of the harpsichord as a present-day instrument — is to produce harpsichords in which the characteristic qualities of brilliance, clarity and lightness of touch, are retained, but which are also capable of taking part in the satisfactory performance of music in a variety of styles, and of remaining physically stable while subjected to the relatively large changes in humidity which occur naturally in certain parts of the world, or which may be artificially introduced in others by the use of central heating. The latter property is, of course, an important factor in improving the stability of the tuning and in preserving the soundness of the woodwork where and whenever such trying air conditions prevail.

All the harpsichords made by Feldberg's have, up to now, employed a relatively heavy, solid, open-frame type of construction, in which the soundboard is fixed directly to the frame — both bottom boards and casing having been released from their traditional soundboard-supporting



South Aspect of Knole in Sevenoaks Kent.



Pilgrim's Way is a pre-Roman road that winds its way from Winchester to Canterbury, which was used for more than three and a half centuries by pilgrims going to the shrine of St. Thomas A Becket.

roles, and dismissed — though the latter does make a reappearance in its decorative capacity, glued to the outside of the frame. The solid pine or mahogany from which these frames were initially constructed was subsequently replaced by laminated wood — as was also, at a later date, the solid pine of the soundboards — it having been previously established by them that no drastic change in tone would result from these modifications.

The largest of the Feldberg harpsichords is their model F.3. A concert instrument of eight and a half feet in length. It has five sets of strings: an eight and a four foot on each keyboard, plus a sixteen foot on the lower, together with the usual coupler, pedals and hand stops. The stringing is mainly of steel, with brass in the bottom octaves of the eights, and steel

spun with copper for all but the top octave of the sixteen foot. The jacks are made to take leather or quill plectra.

When eventually I arrived at the Feldberg workshops, I was joined by my friend Edgar Howard, and together we went upstairs to the showroom — a room some twenty feet by thirty feet, having an open-beamed roof and a floor covered with a cord type carpet — where we set up our recording equipment. A varied selection of Feldberg instruments — clavichords, spinets and harpsichords — lined the room, but what held most interest for us, on this occasion, was the F.3 harpsichord occupying a space near the middle of the floor — one of the two harpsichords that we had come especially to record. This instrument had a laminated soundboard.

Its twin, but for a solid soundboard, was also present among the other instruments assembled there. Both had leather plectra fitted to one four and one eight, as well as to the sixteen foot stop, each of the remaining eight and four foot registers being quilled.

Our immediate job was to obtain recordings of these two instruments while they were still available under the same roof, so that some comparison of their performance would be subsequently possible without the need for any undue haste. Here it was obviously essential to reduce to a minimum the number of variables introduced, and so with this in mind, we placed the microphone in a suitable position and made sure that it remained there undisturbed throughout the entire recording session. Next we marked out the position of each harp-

The Harpsichord — 5



John Feldberg's Workshops and Showroom in Sevenoaks.

sichord, so that when we had finished with the first, their positions could be accurately exchanged, thereby making it possible for us to record each instrument under the same acoustical conditions.

The equipment we used included an S.T.C. 4083 type ribbon microphone, when recording, and a Quad type electrostatic speaker, when playing back — experience over a number of years having convinced us of the remarkable freedom from coloration which this particular combination could consistently provide.

The model 4083 microphone, besides having a very smooth response, has directional properties which are practically the same for all frequencies, and does not therefore form any high-frequency focusing effects.

The improvement in the accuracy of reproduction of complex sounds achieved by the Quad electrostatic speaker is due very largely to the

lightness of its moving parts — their mass being only one two-hundredth of that of conventional type speakers.

The recordings were made with a Telefunken Studio Tape Recorder and were played back through a 25-watt Radford Power Amplifier.

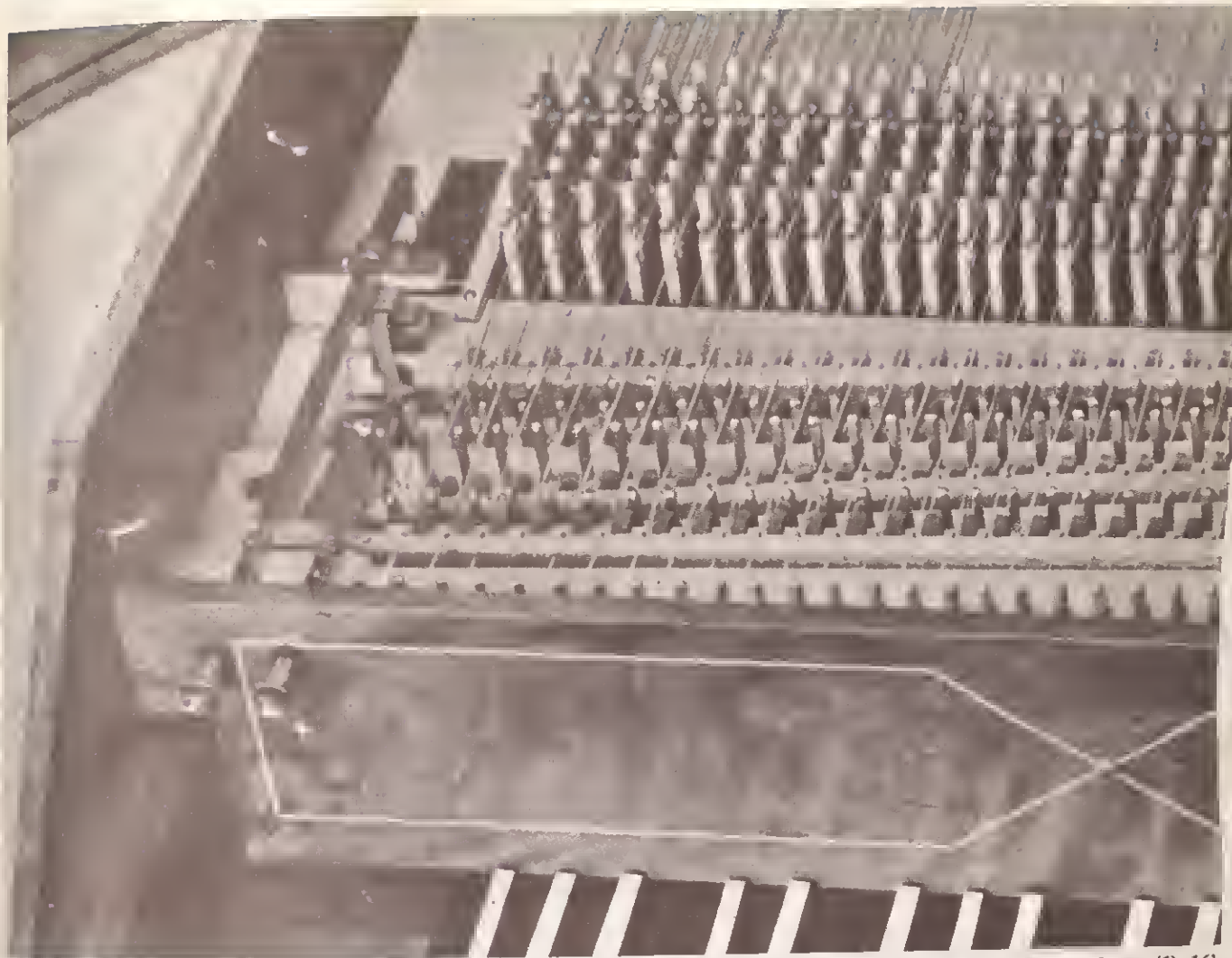
The subject-matter of our recording session consisted, in essence, of single notes and chromatic runs from all registers, followed by various musical items selected with a view to displaying the characteristic features of this type of concert instrument. The complete programme was played on each harpsichord, in turn, and then, in an effort to ease the later work of comparing them, the corresponding items from each separate recording were arranged during the editing to come next to one another, in pairs and in the same order as they had been recorded.

On first hearing the edited recording, I got the impression that

there was not a great deal to choose between the two instruments, but by persistent and more concentrated listening, I did subsequently discover a few subtle distinctions and managed to make one or two general observations regarding them. These were, that the first instrument — the one with the laminated soundboard — had a somewhat sharper tone, which was more consistently maintained over its whole range, and had a tendency to give greater clarity and separation to contrapuntal lines. As against this, the second instrument — having the solid soundboard — gave a rounder, warmer, sweeter tone, particularly in the bass. What would happen to these differences under concert hall conditions, is, until an opportunity occurs to try out both instruments in these circumstances, purely a matter of speculation. My guess, for what it is worth, is that they would probably sound even more alike than they had at our recording session. But I would not



S.T.C. 4083 type ribbon microphone for recording.



Starting from the keyboard end, and following the line of any of the longest bass strings, the component parts encountered are (1) 16' wrest pins; (2) 16' nut; (3) 16' harp or buff slide; (4) 8' lower wrest pins; (5) 8' lower nut; (6) 8' lower harp slide; (7) 8' upper wrest pins; (8) 4' lower wrest pins set lower in the wrest plank; (9) 4' upper wrest pins set lower in the wrest plank; (10) 8' upper nut; (11) combined nut for both 4's; (12) 8' upper harp slide; (13) jacks for 8' upper; (14) jacks for 4' upper; (15) jacks for 4' lower; (16) jacks for 16'; (17) jacks for 8' lower; (18) combined bridge and hitch pin rail for both 4's; (19) combined bridge for both 8's and 16'; (20) combined hitch pin rail for both 8's; (21) 16' hitch pin rail.

be at all surprised to find that I was wrong.

Another interesting experiment involving soundboards is currently being tested on one of the Feldberg standard harpsichords. In this instrument, the normal steady component of the downward pressure exerted on the soundboard — which makes no direct contribution to the production of its musical sounds — is balanced out by mounting one of the hitch pin rails above the level of the bridge, thereby enabling a much lighter soundboard to be fitted if so desired.

A similar scheme is soon to be tried out in conjunction with a much lighter framed instrument of a new

design. But until this work is completed, there is no more for me to tell.

Hugh Boyle
London, England

GO FOR BAROQUE

(Continued from page 2)

member from our headquarters in Denver. He lives in Zomba, Malawi Africa and is Deputy Resident Representative for the United Nations.

We have received many requests for instruction on harpsichord technique. We have found a book which will fit the bill for many students. It's called "The Harpsichord, An Introduction to Technique style" by Harich-Schneider. It's chapter headings

include Touch, Fingering, Phrasing and Articulation, Ornamentation, Tempo and Rhythm, Registration and Figured Bass Playing. It includes photographs of finger positions and an extra pull-out section of musical examples. While it is out of print, copies are available from Clavis Imports, 8780 Gaylord St., Houston, Texas 77024. Price is \$5, and well worth it.

Our next issue features a highly detailed article written by Bjarne B. Dahl with close-up photographs and drawings of instruments by Burkhardt Tschudi. The unique action of the Venetian Swell is illustrated and explained as is the Schudi machine action. We think it's our best instrument article to date. ☺

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The first public appearance made by this F.3 Feldberg harpsichord was at St. George's Chapel Windsor where it was accompanied by three more of its kind in a performance of Bach's Concerto for Four Harpsichords. Later, after a brief return to the workshops for these photographs to be taken, it was on its way to Edinburgh to take part in the Festival. This instrument can be mounted on top of a completely separate pedal harpsichord, made especially for this purpose, which incorporates a swell and has its own four, eight and sixteen foot registers.

RECENT LIBRARY ACQUISITIONS

The Society library has just acquired three works of interest to members. Two of these are short compositions by David Plesnicar of Euclid, Ohio, one for harpsichord, the other for clavichord. The harpsichord composition "A Toye" (which is an occasional 16th and early 17th century title for any light type of virginal composition) is written in 3/2 time and is 16 measures in length. A beginner would not find it difficult. The second composition, for clavichord, is called "A Teare" and is free of time signature or measures. The third acquisition is a two part article "The Clavichord Today", by Dr. Lavern Wagner, Professor of Music and Chairman of the Music Department at Quincy College, Illinois. It covers today's performer, builders, recordings and literature.

One of the many projects we are trying to complete, is a record of all the materials now in the library and available to members. Since the number of items is very small, this shouldn't

take too much time, but getting them mimeographed and ready for mailing seems to be postponed to handle more pressing matters.

All library materials come as gifts from members and interested friends. We do not have an acquisition fund as yet. As we grow in size and stature we hope to be entrusted with the preservation of private libraries. So far, our acquisitions have been in the form of individual compositions and tapes and several excellent papers. If you have extra copies of books, manuscripts, tapes, etc., which you would like to share with other members, perhaps you would consider contributing them to the library.

Library materials are available to all members for a postage and handling fee of \$1. This includes return postage. Period of loan is one month. Inquiries should be sent to I.H.S. Library, P. O. Box 4323, Denver, Colorado 80204. ☺

The Six Trio Sonatas

of which Pirro wrote —

"It is impossible to over-praise their beauty . . ."

Did Johann Sebastian Bach intend them for the Organ or the Pedal Harpsichord?

E. POWER BIGGS

plays them on a Challis

Pedal Harpsichord

on

COLUMBIA MASTERWORKS

Vol. 1 Trio Sonatas 1-3 and
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Passacaglia C minor, the "Great"
G minor, Toccata and Fugue D
minor, etc.
MS 6804 / MQ 790

And . . .

something different

"Holiday for Harpsichord"

A pedal harpsichord romp
through some 19th century
favorites . . .

MS 6878 / MQ 804

Modern Science Creates Magnesium Rose

by Frank G. Munz

The rose illustrated here is patterned after the rose of the pentagonal spinet featured in Vol. II, No. 2 of *The Harpsichord*.

Probably the method of producing it is of more interest than the design itself. This rose was photo-engraved on 1/16" magnesium plate. While this approach may seem uncraftsmanlike, it does have much to recommend it.

The design is first completed on paper in any scale that is convenient (8-inch diameter in this case.) The design can be either white on black or vice-versa, since either negative or positive engravings can be made. The piece is produced by selective corrosion of the plate, so there are limits to the depth of the etching and the minimum width of the lines that can be produced. Extremely deep etching tends to undercut the raised areas. Small etched areas and thin lines do not etch as deeply as larger patterns with greater ratios of area to perimeter.

My rose was made up in three and four inch diameters with the black areas raised. Most of the etched areas

are about 0.035" deep. The peripheral line is shallower, but definition is still quite sharp!

Finishing involves trimming the outside of the rose and working with a high-speed hand grinder and rotary files to grind through the "open" spaces in the center. The "Resist" coating on the raised areas is a rich bronze color and very durable. The etch areas are dull silver. Painting is optional, but the resist is a good base for paint.

Normal photo-etching is quite shallow, so the work should be entrusted to a chemical engraving or chemical machining shop. Magnesium is most commonly used for engraving, although other metals can be used. The engraving will probably cost something like \$10 per copy depending on your location, although I'm sure that better prices can be worked out.

Extremely elaborate and finely detailed roses can be made easily by this technique. If the rose builder has the chance to do some darkroom work with the engraver, it should even be possible, by multiple exposures and etchings, to produce multilayer, terraced designs that were once so very popular with rose carvers.



Clavichord of Note

This small instrument was selected to be featured because it is an excellent example of a Fretted Clavichord. While it is not a harpsichord, an interest in this type of clavichord has been expressed by quite a few of our readers. This particular instrument was made in Germany between 1700 and 1750. While the harpsichord is known as a stringed instrument, since its strings are plucked, the clavichord must be termed a percussion instrument since the strings are struck by metal plates called Tangents.

Another peculiarity which separates the clavichord from the harpsichord is that the tangent is at the same time a 'stopping' agent, similar to a violinist's fingers which 'stop' a string to adjust its length to the pitch of the note required. In hitting the string, the tangent divides it into two lengths. One end of the string (usually the left as shown in the photograph) is permanently damped by a piece of felt. Only the remaining length of the string is free to vibrate so the sound is both 'pitched' and produced at the same time by the same tangent.

In all earlier clavichords, of which this is a late example, there was an economy of strings. The tangents of several different keys struck the same string. Because of this, if a clavichordist wanted to play two notes together which were produced by the same string, he was out of luck. It would be like a violinist placing two fingers on one string of his violin and expecting to hear two notes produced at the same time. Only the higher note would sound.

The word Fretted, when applied to the clavichord, would seem to have some connection by analogy with the same word applied to viols and lutes. In German, the term is *Gebunden* or 'bound' and a fret on a violin is a *Bund* evidently alluding to the fact that such frets usually consisted of strings bound around the neck of the instrument at the appropriate places. Contemporary Turkish instruments still

(Continued on page 11)

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CLAVICHORD

of NOTE



The Metropolitan Museum of Art,
The Crosby Brown Collection of Musical
Instruments, 1889.

use this method of fret marking. Clavichords built later, with a sounding string for each note, are called unfretted, or in German *Bundfrei*. (A detailed article on this type of instrument was written by S. R. Williams and appeared in Vol I, No. 4 of *The Harpsichord*.)

Fretted clavichords were very popular instruments because of their



beauty of sound, simplicity of action and ease of building. The basic case was often made rather roughly with the key extensions beautifully shaped to strike the string at the correct distance from the bridge. The instrument shown here is a good example of this combination of craftsmanship.

The choice of those notes which were to be produced by the same string was carefully selected by a good instrument builder so that when playing in all the common keys, there was little or no impediment. The two notes produced from the same string were most likely not required to sound together. If we search Bach's *Well-tempered Clavier* very few instances of

possible embarrassment will be found even though the unfretted clavichord came into use during Bach's day. The principle of obtaining several notes from one string was that of the monochord and, because of that, earlier clavichords were often spoken of as monochords.

It should be noted here that the clavichord, either fretted or unfretted, offers virtually unlimited opportunity of modifying the tone by means of the touch. Thus, in a fuge, the main figure may be 'brought out' while the secondary figure may be kept in the background. Also, a vibrato prolongation of the note (called in German *Bebung*) is possible with any clavichord by a rocking motion of the finger. Of course, this particular technique is out of the question with either the piano or harpsichord.

Nothing is known of the builder of this particular fretted clavichord

other than he was probably German and worked during the first half of the 18th century. From this point on, only the unfretted instrument was built. Today, a few copies of the old instruments have been made, but most clavichordists prefer the improved one-note-per-string models. No one knows when the first clavichords were built, but it probably dates into the middle 1300's. We know that Goffroy de La Tour Landry, a French writer of the late 1300's, wrote of clavichords and that his writing was translated a century later by William Caxton. We conclude with a quote from this colorful bit of prose.

"A yonge man cam to a feste, where were many lordes, ladyes, and damoyseles, and arrayed as they wold have sette them to dinner, and had on hem a coote hardye, after the manner of Almayne. He cam and salewed the lordes and ladyes, and when he had done to them reverence, syre Geofrey called hym before hym, and demanded hym where his vyell or clavycordes were, and that he should make his craft; and the yonge man ansured, Syre, I can not meadle therewith. Haa, sayd the knyght, I can not beleve it; for ye be contrefaytted and clothed lyke a mynstrell." ☉

COMPOSING FOR THE HARPSICHORD

A dialogue by Robert W. Jones

During the course of my daily association with students — high school students, mostly — one will come to me every so often and ask, "If I wanted to write this down for (some given instrument) how would I do it?" Then he'll eke out the tune on whatever instrument he plays or produce a well-worked-over piece of manuscript paper. As resident composer for our school district, it's my job to have an answer ready.

That's why I felt gratified when the Editor asked me to write an article concerned with the contemporary aspects of composition for the harpsichord and then fortified his request with a list of questions dealing with that subject and a few closely allied to it. Although I'm not at home with learned discourses, I am accustomed to answering questions and carrying on discussions. Therefore, we'll launch into the question-and-answer period without the foregoing lecture.

What motivates a composer to write for the harpsichord.

The thing that motivates a composer to write for the harpsichord is the thing that motivates a composer to write — period. The harpsichord — like the flute, bongo, banjo, and electronic audio generator — is a source of melody and rhythm. Fortunately it — unlike some of its farther-flung brothers — is also capable of harmony and percussive coloration. A fortunate instrument, the harpsichord — one which should never have been lost to the composer's palette.

But the motivation is far deeper than any one instrument — it goes to the heart of expression, itself. So overwhelmingly evident is the fact that the composer's expressive voice comes from the gamut of instrumental sound that I can think of only one whose genius vented itself completely through the voice of a single instrument — Frederic Chopin. He gave us a dis-



photo by Robert Pugliese

tinctive sound, a distinctive personality, a body of literature and the warmth of creative worth — all through the single sonority of the piano. In fact, his body and soul were so attuned to that one instrument and it was so much the perfect expression of himself that his few attempts at expression through other instruments — the cello sonata and the accompaniment to the concerted works — pale in comparison.

Putting the question in the perspective of the here-and-now, I would say that "need" is not enough — "desire" must be the motivating factor in advancing the literature of the harpsichord. If you have a composer-friend who does not understand or is not interested in the harpsichord, please don't ask him to write a piece for you. Your request might move him to *study* the instrument and then, perhaps, write for it. But if he does not feel that it will fulfill a need for expression — with validity both to him and the people with whom he communicates — don't let him waste his time.

What are the major differences new composers should keep in mind when they switch from composing for piano to composing for harpsichord?

Actually, a true composer would — in the words of a contemporary vulgarism — "rather fight than switch." Since the tools of our trade never really become obsolete, it should be the composer's habit to add each newly acquired instrument to his store

of useable experience, rather than feel he could discard one in favor of another. Now, considering the composer a trained pianist, let's look at those differences.

First, there is no sustaining pedal, so one can't write huge sonic compounds like the opening measures of Tchaikovsky's 1st Piano Concerto. There is a school of thought among pianists which teaches that the music of the Baroque era and before should be played on the piano as if it were being played on a harpsichord — with a legato touch dependent solely on fluid and correct fingering. If the composer has had experience with that method of interpretation, he already has an idea of the basic differences between the two instruments. The quick decay factor, another result partially attributable to the absence of a sustaining pedal, will be discussed more fully farther on.

Second, the physical compass of the instrument is smaller than that of a piano, so a composer desirous of "extreme range" effects is somewhat limited in his extremes.

Third, the dynamic spectrum is also generally smaller on the harpsichord. Of course, the wide range of design possibilities — all the way from a small, single-manual instrument with one set of strings and one toncolor to a large, multiple-keyboard instrument with many couplers and color-changing devices — can affect the realistic dynamic limits of a given instrument.

Fourth — because of the weight and vibratory length of the strings, or pairs of strings, in the lower two octaves of the piano, triads, or similar close-position groupings, are extremely muddy in that range. Because of the diminished circumstances of those factors in a harpsichord, similar groupings in like positions remain clear and crisp, each note in a grouping clearly distinguishable from its neighbors; low-range left-hand chords are extremely effective.

Fifth, the sensitivity of the keys to finger pressure is different. The pianist is able to control the force

with which the hammer strikes the string and can thereby govern the dynamic level. The harpsichord is capable of no such control. There is a "forte-piano" device, a mechanism that shifts the entire jack housing so that more or less of the tip of the plectrum plucks the string. That does provide a slight difference in dynamic level, but since it is a mechanical process, it is not a smoothly modulated difference. The dynamics are "terraced" — graded by noticeable levels — a situation which applies generally to the music of the Baroque era. The feeling of graded "loudness" is replaced in the harpsichord by a delicately maneuverable feeling of "fullness". The malleability of that factor is an artistically satisfying feeling with which to work.

When and how does a composer decide that the harpsichord is the instrument needed for a new composition?

There are really only two ways a composer could make such a decision: 1) while strolling through a sublime sylvan setting, the sun's golden rays streaming among the intertwining branches and the delicate fragrance of a thousand blossoms wafted on the murmuring breezes, or 2) upon being asked to write a piece for harpsichord. Unless the writing of music is a person's avocation, the second method fairly heavily outweighs the first.

Let's face it — the starry-eyed composer picking out the magic strains of his great symphony in his freezing attic, alone and unsung (as it were) is a Hollywood nonentity. It would be hard for any of us to think of a work — from a page-long piano piece to an opera — that wasn't requested by someone for some specific purpose with a resulting payment, either in money or performance. During our student days, of course, as with any other apprentice, we learn our trade — we write our practice works and perhaps we benefit with a begged or borrowed performance. But when the writing of music becomes a person's means of livelihood, he — like everyone else — has his price. So rare,

indeed, is our artist-for-art's-sake that as much of the legend of Charles Ives has been built around his livelihood as an insurance man as has been made from his contributions to Music; the fact that he did *without* the expectation of aural or monetary rewards is given equal weight with the contributions he made to the Art.

Sometimes, when a composer is asked to write a work for some specific reason, the instrumentation is not mentioned. At such times, circumstances or a meeting of minds can determine the outcome. Perhaps the commissioner has merely said, "for a chamber ensemble" (as opposed to a symphony orchestra). The field is wide open. What's the occasion of the premier? How large is the hall? What are its acoustic properties? Is there a harpsichord nearby? Any length restrictions on the piece? Only 8 to 10 minutes, eh?

Or: Certainly! I'd love to do a piece for organ, harp and guitar. In fact, look — I'm a harpsichordist and I've wanted to put an organ, harp and harpsichord together for a long time. How about a quartet?

The professional composer can't very often afford the luxury of walking down wooded paths while waiting for that big light bulb in the sky to blink on; as flat-footed and lame as the old cliché may be, necessity is still, for use, the mother of inventions.

Does the composer ever write music first, then say, "This would be great for the harpsichord," or must he start out with the harpsichord in mind at the very beginning?

If it hadn't been for a tune's evolving out of George Gershwin's genius and demanding to be set down before either his brother, Ira, or DuBose Heyward had an opportunity to think up the words, we would have been denied the luxury of "Summertime". I know a similar thing happened with Gilbert and Sullivan; it might also have happened with Rodgers and Hammerstein. Admittedly, I'm talking about songs and song-writers. But I'm also talking about the creative process. A tune — a good melodic

rise-and-fall, an interesting motivic grouping, a promising group of notes, a "feeling", call it what you will — *has* to come in order for the creative machinery of the spirit to begin turning. But that still doesn't necessarily make the budding expression "For" anything in particular; in other words, it has not yet achieved the dimensions of idiomatic concreteness which bind it to some particular instrument.

Prior to the Baroque era, music was an absolute expression, not designated for any given instrument, not locked into the academic complexity that made each successive redesigning of an instrument more and more complex, refined and "individual" — the inverse reaction that made each striving after a simplification of the playing of a given instrument evolve, in turn, a more complex instrument. The recorder was a simple instrument — a tube with some holes in it and a fipple stuck in one end. The krumphorn was the same thing, except that it had a delicately buzzing double reed capped under its mouthpiece. They were all basically simple instruments designed in families like the human family with some extra members at either end that could play notes the humans couldn't reach. Then the refiners and the inventors came and started adding keys, and keys to play the keys, and our wind instruments were on the way to becoming plumbers' nightmares. Sanity prevailed and they were refined once and for all for players with two five-digit hands. The brass instruments went from tubes that called for a pair of iron lips to tweet out a few notes to valved and pistoned masterpieces of the welder's and polisher's arts. The strings underwent hardly any overall physical change, always remaining jewels of the craftsman's ability to capture vibrations in a wooden box. Above all, instruments gained their "idiom".

The harpsichord also has its idiom.

If a budding composer wrote a work at the piano which placed a great deal of the demand for correct interpretation on that instrument's

sustaining pedal, he might think to himself, "This would be great for the harpsichord" — if he had never tried to play the harpsichord. Such a work would be hard to reconcile even on the organ with additional performance help from the feet; it would be nigh unto impossible on the harpsichord. Right there — right at the sustaining pedal — is where the line has to be drawn. If the piece can survive without that mechanism and the legato necessities do not go beyond the reach of the human hand, then it might, indeed, be great — or, at least, good — for the harpsichord. Otherwise (and preferably) start with the harpsichord in mind.

It is generally not necessary for a composer to actually play all the instruments he composes for. Is this also true for the harpsichord?

In the idiomatic sense, no. There are, of course, schools of creative opinion which feel that the composer need have no working knowledge of any instrument. All he needs is a bookish notion of how high it can go, how long it can go, how many burps, squeaks and clunks it can make and he's off and jogging — true creativity unfettered by any maudlin practical considerations. Then, if he figures it can be played more expressively with a baseball bat than with the fingers, he's "truly inventive".

Practically speaking, I think that the more complex an instrument's productive capability, the more necessary it is for the composer to be aware of the method of playing the instrument. With the "single-line" instruments, the winds and brasses, the composer has the least need to be able to play these. He can learn by rote their ranges and physical limitations and become aware of what is idiomatic to the flute, or the French horn, or the trombone by talking with performers on the instruments. He can also travel the rocky road of experience by writing something for trombone which is better suited to the clarinet and having the riot act read him by the trombonist. In fact that's not the worst learning method imaginable; non-keyboard

musicians are quite outspoken and will tell you very quickly and in no uncertain terms whether or not something is playable.

The stringed instruments require more thought, basically because of their ability to play more than one note at a time. As beautiful as multiple stops can sound, one just can't pull these out of thin air; there are very definite combinations which *can* be played and those which *can't*. When the desire is for chords of three or more notes, the choice of possibilities becomes even more limited. The only advice I can offer a composer who cannot play a stringed instrument is that he marry a wife who can.

The keyboard instruments are something else. As a keyboard performer, I feel that knowledge of the method of playing is vital to well-rounded creative expression on a keyboard instrument. Looking at the situation from the point of view of the performer, I would be and have been willing to sit with a non-keyboard composer who wished to express an idea using that medium and conclude, "This is what you have to do in order to make it work". But, believe me, it isn't the same as built-in experience. The process of "making it work" might result in a piece of playable keyboard music, but it might also no longer represent the composer's original creative intent. If the composer cannot play the harpsichord, he should at least work very closely with someone who can. It's not the best answer, but it is far superior to creating a piece of music and then hoping it will "go well" on the harpsichord.

I should clarify one thing: players on any instrument will tell the composer that he should be able to play that instrument in order to be able to create effectively for it. If one speaks of "virtuoso" pieces for a given instrument, that is true. But for day-to-day use, what I've previously said holds true.

Must the composer limit himself to a one-manual instrument; should he avoid situations which would make his music unplayable on a one-manual instrument?

When a composer is definitely designing a work for a two-manual instrument, he should make the fullest use of its capabilities, both in registration and independence of manual, with no thought for the one-manual instrument. However, I think it's safe to say that, among today's burgeoning family of harpsichord enthusiasts, the one-manual instrument outnumbers the larger instruments by a goodly margin. If one is going to enrich the contemporary repertoire in such a manner as to accomplish the greatest good for the greatest number, it would be better to concentrate on pieces suitable to the one-manual instrument.

But, if the composer wishes to create a work which would provide opportunity for an interesting performance on a two-manual instrument and yet not suffer when taken to a one-manual instrument, there is really only one situation which must be avoided. That is the writing of music which, when played on a two-manual instrument, would call for the use of one hand directly over or under the other. Playing such a work on a one-manual instrument, the performer would end up with a mash of twisted fingers. That's the main hazard involved in trying out some late 19th and early 20th Century organ music on the piano. One is confronted with the same need for instant codification presented by a full orchestra or band score. If you try to play the music exactly as written for both hands (forgetting the pedal for a moment) you come up with a massive fistful of confused digits.

For some reason, it appears that, when a composer is approached with the idea of writing a work for organ, harpsichord, harp, accordion, ocarina, or some other instrument which is normally considered "unusual", hard-to-play, or beyond his understanding, he feels compelled to write a work for the biggest one of whatever-it-is that exists, employing every technique imaginable. I'm tempted to believe it happens because the composer thinks he won't feel like writing or will never again be asked to write a work for that instrument.

What is needed is music which is of our time, of course, but geared to the patience, understanding and technical ability of the greater number of harpsichord enthusiasts — not an army of Landowskas.

Since the harpsichord cannot sustain long holds, and the composer must write around this limitation, does this limit the composer's creative processes?

Nothing should limit the composer's creative processes. Circumstances might restrict his mechanical processes, but nothing (least of all the harpsichord's difficulty in sustaining the results of a given plink) should be responsible for blanking out a composer's creative thinking.

The question, in a sense, answers itself before it is asked. Since the harpsichord cannot sustain long holds, the composer must gear his thinking so that his creative processes circumvent sustained pitches.

Even with the necessity for that restriction in mind, we can look back on the output of the men whose lives were spent with the harpsichord as their only major keyboard instrument other than the organ. Because of their association with the human voice, breath-controlled instruments and the organ, they had grown fond of long, sustained pitches and devised a way of approximating that feeling on the harpsichord. They employed the long trill. Although for the un-practiced it can prove to be a pain in the hand, it does provide the composer with a way of having his harpsichord and long, sustained notes, too. As an example, take a look at J. S. Bach's first sonata for viola da gamba and harpsichord. It's a re-working of a sonata he originally wrote for two flutes and continuo. He gave one flute part and the bass line to the harpsichord and the other flute part, re-registered, to the viola da gamba. The opening two bars of the first movement present a "D" in the right hand of the harpsichord part which must be sustained for a measure and a half of slow 12/8. That wasn't much of a problem for the flute, but Bach seems not to have lost any sleep wondering how he would re-

write it for harpsichord — he knew there were only three solutions: hit it once and forget it, repeat it at tasteful intervals along the way, or trill it.

Although it wasn't highly thought-of as a keyboard technique during the heyday of the harpsichord, we are free (if we know how to use our freedom) to extend our thoughts outward from the trill — the alternation of two adjacent notes — to the tremolo, or alternation of two distant notes.

Somewhere in there falls the "bar-room" tremolo, or alternation through wrist flexibility of a whole handful of chord tones. The farthest limit would, I imagine, be the rapid alternation of hands, each with its own portion of a large harmonic complex. I see no reason why any of these techniques should be disregarded as valid methods of obtaining sustained notes or sonorities on the harpsichord.

How does a composer indicate the expression to be used in a harpsichord composition when there is no standard instrument upon which to base expression?

Since the harpsichord, like its contemporary organ, is an instrument of terraced dynamics, the expression gained is dependent to a great degree on the registration used. Because there is no "standard" harpsichord, just as there is no "standard" organ, technical indications cannot be too pointed. Registration indications, if these are used, must be general.

The fact that, on some instruments, mechanical devices are actuated by foot-operated pedals and on others by manually controlled levers bears heavily on the practicality of various registrational desires. Don't write with the foot-operated devices in mind; think of the man who has to get a hand free to make a registration change.

Use simple dynamic indications — "p" and "f"; even the old "mezzo" markings aren't heavy with meaning for the harpsichordist. If you're of a mind to do away with Italian, just say "soft" and "loud". Feel free to use pitch-level indications — 16', 8' and 4' — these will at least give performers a picture of the kind of tone-quality you have in mind; on some instru-

ments, they can also be followed.

It would be Utopian if composers could write all their works for two-manual instruments with all pitch levels available to each manual and the upper manual coupleable to the lower; buffs, bells and banjos at all levels, a swell shade and a full 32-note pedal clavier. Then we could register most completely. But, that isn't the case, so we must tastefully try to travel somewhere within the opposite extreme.

In good conscience, I think the composer should write absolute music, letting the driving force of its own expression guide the performer to use (once again, tastefully, one would hope) the mechanisms available to him on his own instrument. Those very sparing general indications of dynamic and registrational desires (remembering that these can be no more than desires) can be indicated in important places in the score. But the composer shouldn't lose his fingernails with worry over the fact that his injunctions are not being scrupulously obeyed. Composers so inclined should enter the electronic tape medium — there, things are always exactly the way the composer wants them.

Wanda Landowska wrote a few compositions for harpsichord. Did her knowledge of the instrument help her compose works of importance or (because of this knowledge) were these rehashes of previous compositions?

Naturally, I cannot presume to judge, since I neither knew Mlle. Landowska nor have I ever heard any of her compositions. But, I think I can give an educated opinion.

The most accurate answer one can give is that Mlle. Landowska's knowledge of the harpsichord prepared her to write knowledgeably and "comfortably" for that instrument; as Paganini's knowledge of the violin, Koussevitsky's familiarity with the string bass and Piatigorsky's experience as a cellist allowed them to compose and arrange with idiomatic correctness for their instruments.

Since it appears that all of her works for harpsichord were arrangements of Polish and French folk ma-

FROM VIOLINS TO HARPSICHORDS



by Harry S. Wake

Just why a successful, professional maker of violins, violas and 'cellos would start building harpsichords and clavichords may be a little difficult to explain. However, I think that if I go back a few years, quite a few years, you will perhaps understand.

I have been associated with violins in one way or another for all of my sixty nine years. Indeed from the cradle, because my father was a concert violinist and as a boy in England I don't recall a single day when that violin wasn't going at least half the day. How I loved it! We had a good

relationship, my father and I. He started me on 'cello lessons when I was seven and under his tuition I progressed to a point where I played my first professional engagement at age fourteen. Incidentally I was obliged to join the Musicians Union in order to play that engagement. I felt very important.

If you are wondering what all this has to do with harpsichords, I ask you to bear with me as this background is essential to the story.

Dad was a connoisseur and collector of old violins and 'cellos and his favorite pastime was visiting violin

makers shops and old second hand stores (we call them antique dealers in this country), always looking for good old fiddles and art objects.

He would play the violins and compare one instrument with another, would comment on the virtues of this or that maker's work, would bargain and horse trade and usually come home with another fiddle.

Dad would take me along on many of these fiddle hunting excursions and I would sit in the background taking it all in, unconsciously learning a great deal about the works of the old master violin makers of England, France and Germany.

Now, as I have already fairly well established, my father was a fine musician and an expert in his knowledge of violins, but I must say that when it came down to the mechanics of fixing anything, he was a total flop. He wanted to fix things and repair the violins that needed attention but he always messed things up. He knew the right way to do anything pertaining to the making and care of violins, but he was not able to do it himself.

Now it turned out that I was a "natural" with tools and by the time I was nine or ten years old, Dad would call me into his music room and say "Let's fix this fiddle" then he would sit there and watch me do it. I would remove the top of a violin, check the inside, do the necessary repairs and replace the top. All under his supervision, of course. Everything would usually come out alright. The next thing I knew, we were making fiddles. I say "we" because he supplied

COMPOSING DIALOGUE . . .

(Continued on page 15)

material and that all but two of her piano works were transcriptions from Lanner, Schubert, and Mozart and cadenzas for concertos and sonatas of Mozart, Handel and Haydn, it would seem that she correctly saw her training as a composer to be a wonderfully usable adjunct to her greater calling as a reinterpetive keyboard artist. She used her talent to reinterpret folk melodies, reinterpret other composers' settings of folk melodies and create

tasteful cadenzas; from the pen of someone of her musical integrity, I doubt they could ever be called "rehashes" of anything.

What is a work of "importance?" It is important that piano concertos have good cadenzas: Wanda Landowska supplied these for nine concertos and Mozart's Sonata K333. Without ever having heard any of them I would predict that they are stylistically correct and musically interesting. That is "important".

I'm not deeply concerned with her

original compositions; her greatest expression came to us through her fingers, not her pen. Naturally, a person cannot be a consummate interpreter of other peoples' inmost expressions without those expressions stirring, likewise, in the interpreter. Therefore, those feelings have every right to be put down on paper. I will not remember Pablo Casals as a composer, but as a masterful singer of the songs of others; I must say the same for Wanda Landowska. ☺

(Part II continued in next issue)

all the right information and, as usual, I did the work.

We were a good team and I think we must have made eight or ten violins before I was fourteen years old. We did quite a little experimenting with violin varnish too, in those days, and I recall at least one conflagration we caused which might have been serious had we not acted promptly. We had all the necessary ingredients for varnish making. All the exotic gums, resins and essential oils. We would melt them, dissolve them, cook them and in the end, developed an excellent violin oil varnish. I enjoyed the whole thing immensely.

Dad would have his string quartet session once a week with other adults and on these occasions, we kids would just be quiet and go about our different chores. However, I had a younger brother and three sisters and we all played instruments with more or less proficiency. Occasionally we had our own ensemble sessions. Dad used to write a lot of music and he was amazingly fast with the pen. He would retire to the music room after supper and half an hour or so later call us kids in. With ink still wet on the manuscript, he would have us play what he had written. It might be a trio for three 'cellos or a duet for two 'cellos. It could be a quartet or maybe a duet for violin and 'cello. The best part of these sessions was that each part was written within a degree of difficulty to suit each player. If Dad was playing the violin, his part of course, would be quite technical while we would have accompanying parts with an occasional few bars of a solo thrown in. My younger brother was not quite as advanced on the 'cello as my older sister and myself so he would have a very simple part sustaining the bass notes. It was all good fun and excellent reading practice for us, but don't think for a minute that it was all honey and roses. There would be flare ups between us and at times a few wet tears when Dad would reprimand us.

We would play Bach, Hayden or Mozart in addition to Dad's compositions, however, it was almost always

a string group. Although we owned a piano and two of my sisters played the instrument, it was seldom included in our playing sessions.

On looking back on this period of my life, prior to age fourteen, I can see that they were happy years, years of fun, development and learning. I enjoyed the music and didn't mind *too* much the long hours of 'cello practice I had to put in. But in addition to this, I had a very strong inclination for mechanics. I liked to make things and see them work. I enjoyed the work I did on violins and the fact that they were improved after my attentions was most encouraging to me.

This interest and activity in mechanics was beginning to cause no little consternation with my parents. It undoubtedly was presumed by all that I would follow a career in music and here I was breaking the traces.

I remember at this time, that my father called me aside one day for a heart to heart talk regarding my mechanical transgressions. He asked me if I wanted to follow a career in music or in engineering, saying that he would help me whichever way I wanted to go. However, if I intended to follow a career in music I must really knuckle down to study and practice.

My decision was to go all the way with music. However, this was the year 1914 and destiny was about to play a very important part in my future.

England declared war in August of that year and the years that followed were chaotic. This was World War I.

My older brother was the first of us to go. Then my father was next in uniform. Although I was under age, I enlisted in the Royal Marines in May of 1915. My brother was killed in action in June of the next year. I was out on a disability late in 1917 and Dad was in for the duration.

These had been rough times, however, I picked up my 'cello studies where I had left off and was doing quite a lot of professional playing and managing to do a little violin making between engagements. However, after

the hectic war years I could not feel settled and the prospects for my future did not look very encouraging. It was then, at twenty one years, that I made what I think was probably the most important decision of my life; to move to the United States for permanent residence and citizenship.

The next forty years were quite eventful and now that I am able to look back on them, I see a panorama that would be difficult to put into words. This includes my years as a professional musician, the difficult years as a young married Mechanical Engineering student, the happy years as engineer and designer in high industrial plants; yes, and as a violin maker. I did not espouse the latter professionally until after my retirement from industry.

During those years I was able to build up a good collection of fine old master violins and my work as a maker had been steadily improving. My reputation as a connoisseur and maker of fine violins had fortunately followed me across country. When I settled on the west coast in 1952 the violins, violas and 'cellos I made were sold almost as fast as I made them.

It had been with some considerable regret that I had retired from my engineering work in industry. I loved the action, the big machines, the huge aircraft that we built. I loved being a part of it all. Being a part of investigating and developing new ideas and new exotic materials. But I was also happy in the knowledge that I enjoyed excellent health and could now devote my time to violins and violin making. I had gone full cycle from violins in my early years and back again in my later years. I was complete fulfillment of my boyhood dream and I was content.

I had won many awards for my violins and 'cellos in national competition and each instrument I made, I am sure contained a little of myself. I had also, over the year, written numerous short articles relating to violin making and repairing. Since retirement, I have made a selection of these and published them as "A Luthiers Scrap Book". The first printing

was completely exhausted in less than two years of world wide distribution and a second edition is now in the works.

I have always enjoyed playing chamber music, quartets, trios and string ensemble, playing particularly the old master works of Beethoven, Hayden, Mozart, etc. I have played with the large and famous symphony orchestras under such equally famous conductors as Ormandy, Stokowski, Toscanini, etc., but for me, the greatest pleasure is in the smaller group playing. It is more personal and intimate.

As a diversion from violin making and also as a means of keeping on friendly terms with my 'cello, I meet once a week with a string ensemble group. They are all men of considerable playing experience and ability and we all derive a great deal of pleasure from the meetings.

It is my usual practice to do my reading and writing in the evening and one evening I noticed a small advertisement for a harpsichord kit by Wallace Zuckermann. I didn't pay too much attention to it at first, but during the next couple of days it kept recurring to me, "Harpsichord", what a pleasant thought. "Build your own", that makes it even better.

My wife had been wanting a new piano. Now I could build a harpsichord which I am sure she would prefer. And I was right.

I didn't have any thoughts about it being easy or difficult to build but I did have some doubts as to whether I could make a good musical instrument.

I ordered the kit and in due course all the materials arrived. It came in a massive package and I thought "my gosh, what have I got myself into". Everything went like clockwork — well almost. There is a lot of tedious work in assembling the strings, voicing and tuning, but this is what makes a project like this worthwhile.

I was able to complete the instrument in good time without any assistance and how beautiful it was! The tone was much better than I ex-

pected and the overall appearance left nothing to be desired. My wife just adored it and would play for hours and that's something she never did with a piano. She invited all her friends to see and play it, but she was due for a very big surprise. I sold it from under her. She didn't know it, but I was hooked with harpsichord building. I had really enjoyed building that harpsichord and wanted to build another. So when a friend asked to buy it for High School use, well, what could I do but let him have it? It would be much easier to build the next one.

What was this fascination, this sudden switch of interest from violins to harpsichords? I tried to analyze the situation and figured that perhaps it was that I welcomed a change in my creative endeavors. I was involved with different materials, was facing a new challenge inasmuch as I was being called upon to use my skill to produce as fine a musical instrument as the designer intended and as was possible with the materials available to me. I also wanted to know more about the instrument, and what better way to learn than to build one.

This was an instrument of tradition and with a history as long and as proud as the violins of Brescia and Cremona, for these reasons I had no feelings of guilt about neglecting my violins. Anyway, I had no intention of deserting them. They were in my blood. Besides, there was violin repair work coming in all the time and this had to be taken care of as I had no apprentice to do it for me.

I ordered materials for another harpsichord. This one, of course, was much easier to build than number one and the results were equally gratifying both to my wife and myself.

In the meantime, although I was not actually making any violins, the routine work of repair and restoration of customers' violins continued as usual. However, even though my second harpsichord was finished, I was still not in the mood to commence work on making another violin or 'cello. I was undecided as to my next project. A two manual harpsichord was in the

back of my mind, but I felt that perhaps I was getting ahead of myself. I would build a clavichord next, and then maybe a two manual harpsichord.

I ordered the clavichord plans and materials from another company and in spite of quite a few problems, was able to complete a very nice instrument. By this time, I was completely involved and, as to future plans, I had some ideas that looked good.

For one thing, I would use less pre-cut material and build an instrument having a curved side. I also had some ideas regarding the clavichord.

As I have mentioned, the clavichord was completed and with the judicious use of fine wood mouldings and finishing materials it turned out to be a good musical instrument. I'm sure it's elegance will enhance the decor of any room. The tone is pure and sweet, but as you are aware, the clavichord tone is quite small. This small tone is all very good for the purists and for intimate playing, but there are frequent occasions when it would be nice to have a little more volume. Of course the only way to do this would be electronically, however, I had read somewhere that this was not very satisfactory because all the extraneous sounds were also picked up and amplified, even the tapping of the fingernails on the keys. I gave the matter some thought and decided to investigate the electronic amplification possibilities for the clavichord.

At first, I thought of using a contact microphone attached to the soundboard, but soon realized that this was the method that would pick up all the unwanted extraneous sound, so this wouldn't do. Then I thought of the electric guitar and its magnetic pickup and I was sure that this was the way to go, but it would have to be worked out.

I picked up a cheap second hand guitar that was fitted with two magnetic pickups and the usual controls. I also got the guitar amplifier. It was necessary to break open the instrument in order to remove the controls and wiring, but this was no great loss.

I now had two magnetic pickups

together with all wiring and controls which I would have to adapt to the clavichord.

A few preliminary tests proved that I was on the right track and that it was going to work. The span across the strings of the clavichord is just about six and a half inches, so it soon became evident that a third pickup would be required. This I got from another cheap instrument.

The three pickups were mounted in a staggered position on a thin (one-sixteenth inch) phenolic board and the complete unit slid under the strings, the unit being placed in such a way that each string would cross the magnetic field of one of the pickups. The terminals of each of the three pickups were brought to a terminal strip on the phenolic base of the unit and wired from there to the controls.

The above operation required a good deal of maneuvering but it looked neat when finished. The main difficulty was in mounting the pickups so there was a minimum of clearance under the strings.

The system worked beautifully through the guitar amplifier. The tone being bright and clear with no interference. However, it became immediately evident that the brass strings which were in the bass end of the keyboard would have to be replaced with steel strings. This I had overlooked. I bought a few coils of steel music wire from the local hardware store but this did not work too well. The steel wire was of a fairly heavy gauge and this produced an unpleasant 'bong' type of tone. A switch to copper wrapped steel strings was the answer to the problem. These wrapped strings were made for me by the Williams Workshop, 1229 Olancha Drive, Los Angeles, Calif.

No sooner was all this work completed and working just right, when I discovered that a special magnetic pickup is available for the autoharp. This pickup is quite thin, about one inch wide and eight inches long; just right for the clavichord. I made some inquiries and purchased a De Armond Model 1300B from Rowe Industries,

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Inc., 1702 Airport Highway, Toledo, Ohio. The unit has a tone and volume control built in and can be plugged directly into any amplifier. Being quite thin I found it necessary to mount the unit on a strip of one-eighth inch felt in order to get the close clearance under the strings. The autoharp pickup is much more satisfactory and easier to install than the guitar pickups but the cost is rather high. About thirty dollars. Three new guitar pickups would cost you about the same.

Now with the clavichord project cleared up and finished, I thought it

about time for me to get started on making another violin. In fact it was essential that I do so because I had sold the last one available of my own make. It was with some reluctance that I sold my number two harpsichord to the same person.

I have since completed number three harpsichord (I told you I was hooked) and have promised my wife that I won't sell this one. The next customer will just have to wait.

Harry S. Wake

San Diego, California

The Harpsichord — 19

LETTERS

Dear Mr. Haney:

The number of surviving old harpsichords is limited and one of the most important duties of everyone interested in the subject should be to preserve them, both for the musical enlightenment they can give when carefully and intelligently restored and for the important organological information which they embody.

May I enlist your help to bring to the attention of your readers a small book which attempts, I think for the first time, to bring together systematically certain principles which should be followed in restorations. This is "Preservation and Restoration of Musical Instruments., Provisional Recommendations" by Mme de Chambure, Dr. A. Berner and Dr. J. H. van der Meer; Evelyn, Adams and Mackay, 1967.

May I also suggest that Mr. Zukermann's column might be better employed in the service of the understanding of old instruments and one Italian harpsichord in particular (*see Vol. II, No. 1, The Harpsichord*) if, instead of presenting us with a *fait accompli*, he had posed his "dilemma" before dismantling the harpsichord and had asked for advice from your readers. Having survived nearly three hundred years it is a pity to have rushed into a restoration when six months delay might have brought information he would have found helpful and relevant.

Whilst without having seen the instrument before restoration I cannot state categorically that it was wrong to strengthen the case, there is plenty of cause to doubt whether Mr. Zuckermann has come to the right conclusions. The instrument is not unique. Another Italian harpsichord in a private collection in Britain is similarly devoid of any form of internal bracing. The owner has not rushed to strengthen it but has instead assumed that the maker knew what he was doing, and has set about determining what thickness of strings it will stand.

20 — *The Harpsichord*

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The result is very satisfactory and is, moreover, in line with the recommendations of the book mentioned above (page 8):

"I (a) In no case may concessions be made in view of modern concert performances when restoring an instrument. It must be restored in such a way that a very close approximation to the original construction is achieved; it must sound as nearly as possible as it did during the period when it was regularly played or, to be more precise, as we believe it did, according to the results obtained by historical research . . . An old instrument need not necessarily be tuned, after restoration, to modern pitch. If the instrument cannot support the string tension, it is quite possible to tune it a half tone or a whole tone lower, as pitch varied greatly in past centuries."

John Barnes, Curator,
Russell Collection of Early
Keyboard Instruments,
Edinburgh, Scotland

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